

REMARKS

Claims 150-153 and 164-166 stand rejected under 35 U.S.C. 102(b) as being anticipated by Lien et al. (U.S. 5,309,264). Claims 154-155, 157-158, 160-161, 163, and 167-168 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lien. Claims 150-169 have been canceled without prejudice, rendering the rejection thereto now moot. Applicants submit that new claims 170-187 are allowable over the Lien reference for the following reasons.

The present invention relates to a vertically aligned ("VA") type liquid crystal display ("LCD") device having a first domain regulating means on a first substrate and a second domain regulating means on a second substrate. The first domain regulating means includes first and second line portions which are different, and extend in different directions. The second domain regulating means includes third and fourth line portions which are also different from each other, and also extend in different directions. According to this configuration, at least four domains, having at least four different azimuth directions may be formed. Moreover, by having line portions on one substrate parallel to respective line portions on the opposite substrate, the present invention advantageously realizes superior domain regulation control over the Lien reference, as well as the other prior art of record.

Lien discloses only X-shaped slits on a single substrate. Nowhere does Lien teach or suggest two different domain regulating means on two respective opposing

substrates. More particularly, Lien fails to disclose first line portions on one substrate being parallel to third line portions on a second substrate, or second line portions on the first substrate being parallel to fourth line portions on the second substrate. In other words, Lien fails to teach or suggest the superior domain regulating configuration and control of the present invention.

The previously cited prior art references similarly fail to teach or suggest the present invention. The Koma reference (U.S. 5,698,556) discloses different domain regulating means on two opposing substrates, however, only one of Koma's domain regulating means includes anything that could be considered "line portions." On only one substrate, Koma reveals an X-shaped slit similar to that disclosed by Lien. On the opposing substrate, on the other hand, Koma discloses only an orientation control electrode, and nothing else that could be described by any fair interpretation as "line portions."

The Hirata reference (U.S. 5,953,093), unlike Koma or Lien, is drawn to a twisted nematic ("TN") LCD device, and not one of the VA type. And as previously discussed, TN technology is neither analogous nor compatible to VA technology with regards to control of azimuth angles. Hirata's "protrusions" only serve to provide pre-tilt to the liquid crystal molecules, and do not contribute to control of azimuth orientation. Hirata teaches only the rubbing method as a means of azimuth orientation, which expressly teaches away from the present invention that avoids the rubbing method. Additionally, even if the generally imprecise rubbing method could somehow be utilized as domain regulating means

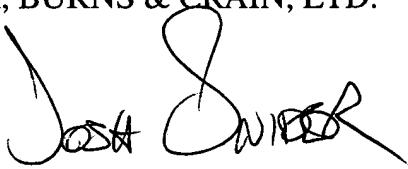
to provide at least four separate azimuth orientation angles, the rubbing method could not achieve the precisely chosen orientation angles provided by the protrusions that would be utilized as domain controlling means in the present invention. In short, Hirata fails to teach protrusions as domain controlling means for the azimuth orientation angles.

For all of the foregoing reasons, Applicants submit that new claims 170-187 are in condition for allowance over the prior art of record, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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